

Customer No.: 31561
Application No: 10/708,171
Docket NO.:12681-US-PA

REMARKS

Present Status of the Application

This is a full and timely response to the outstanding non-final Office Action mailed on June 21, 2004. The Office Action has rejected claims 1-8 under 35 U.S.C. 112, second paragraph and under 35 U.S.C. 103(a) as being unpatentable over Schroder (USP 6,215,135) and Chen (USP 6,016,002).

Claims 1-8 remain pending of which claims 1-4, 7-8 have been amended to more accurately describe the invention. It is believed that no new matter is added by way of these amendments made to the claims or otherwise to the application.

After carefully considering the remarks set forth in this Office Action and the cited references, it is however strongly believed that the cited references are deficient to adequately teach the claimed features as recited in the presently pending claims. The reasons that motivate the above position of the Applicant are discussed in detail hereafter, upon which reconsideration of the claims is most earnestly solicited.

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Discussion of Office Action Rejections

The Office Action rejected claims 1-8 under 35 U.S.C. 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Office Action considers that all claims include the limitations of "a substrate of first type," "region of second type", etc. indefinite because it is not clear what these "types" refer to. In this regard, Applicant has amended the claims according to the suggestions offered by the Examiner. It is respectfully requested that this rejection be withdrawn.

The Office Action rejected claims 1-8 under 35 U.S.C. § 103(a) as being unpatentable over Schroder (USP 6,215,135) in view of Chen (USP 6,016,002).

To establish a prima facie case of obviousness under 35 U.S.C. § 103(a), the reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims. Further, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. See M.P.E.P. § 2143, 8th., February 2003. Applicants respectfully submit that Schroder and Chen are legally deficient for the purpose of rendering claim 1 unpatentable.

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The present invention teaches, among other things, 'a substrate of first conductive type; a deep well region of second conductive type, disposed in the substrate of first conductive type; a well region of first conductive type, disposed in the deep well region of second conductive type; a first transistor, disposed over the well region of first conductive type, wherein the first transistor comprises a first gate, a first source and a first drain; a second transistor, disposed over the substrate of first conductive type, wherein the second transistor comprises a second gate, a second source and a second drain, wherein the second source is connected with the first drain, and wherein the second source and the first drain is disposed in a portion of the first conductive type well region, a portion of the second conductive type deep well region and a portion of the first conductive type substrate.' The electro-static discharge protection circuit of the instant case is constituted with a triple well structure, wherein a pnp parasitic bipolar junction transistor 204 may form by, for example, a p-type well region 104, an n-type deep well region 130 and the p type substrate 100, and a npn parasitic bipolar junction transistor may form by, for example, a n-type deep well region 130, the p-type substrate 100 and the drain 108 (as shown in Figure 2). As recognized by the Office, Schroder is completely silent about a triple-well structure. Schroder simply teaches a diode structure forms with the well (WLL) and the substrate (SBSTR). Accordingly, there is no where in Schroder that can suggest a pnp parasitic bipolar junction transistor 204 or a pnpn semiconductor structure, which would result with a silicon control rectifier structure. The Office Action, however, still relies on Chen to teach a well of a second conductivity type formed in a deep well of a

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first conductive type. As shown in Figure 4 of Chen, a single transistor 112 is disposed over the deep well region 98 and there is no transistor being disposed over the well region 100. Therefore, if a well as taught by Chen is added to the deep well of Schroder, both transistors g2 and g1 of Schroder must be disposed outside the well. The present invention, on the other hand, teaches that the first transistor is disposed over the well region of the first conductive type and the second transistor is disposed over the substrate of the first conductive type. Therefore, the combination of Schroder with Chen fails to teach or suggest each element of the present invention.

For at least these reasons the references, taken alone or combined, fail to teach or suggest each and every element recited in the claims and the motivation to combine is lacking. Therefore, Applicant respectfully submits that all rejections have been rendered moot and/or accommodated and that the now pending claim 1 is in condition for allowance. Since claims 2-8 are dependent claims which further define the invention recited in claim 1, respectively, Applicants respectfully assert that these claims also are in condition for allowance. Thus, reconsideration and withdrawal of this rejection are respectfully requested.

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CONCLUSION

For at least the foregoing reasons, it is believed that the presently pending claims 1-8 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

Date :

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